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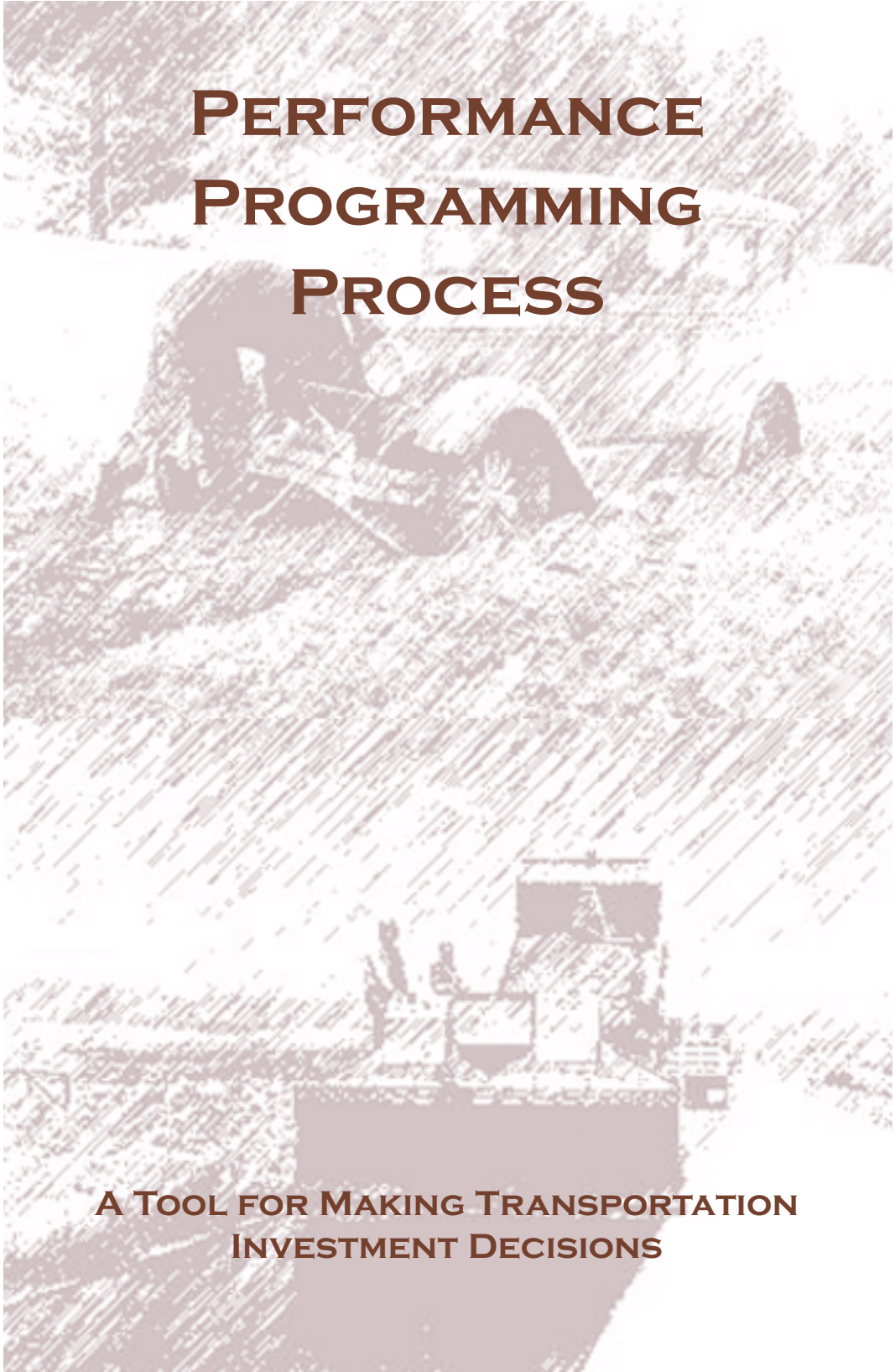
MDT is on the web at www.mdt.state.mt.us

Performance Programming Process



A Tool for Making Transportation Investment Decisions

How Does a Project Get Funded

We're often asked how a project gets selected for funding within Montana's highway construction program. This booklet is intended to provide you with a brief description of the process used for the Interstate, National Highway, and Primary Systems.

Very simply, for a project to be funded it has to address both a specific transportation need and contribute to overall transportation system performance goals.

All along the way – from planning – to programming – to project delivery there are ways for you to get involved. The Montana Department of Transportation (MDT) staff listed at the back of this booklet are good points of contact for each of these activities. Or, if you'd like more information on the ***Performance Programming Process*** *(P^3) visit the Department's internet web site at www.mdt.state.mt.us.*

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What is the Performance Programming Process?

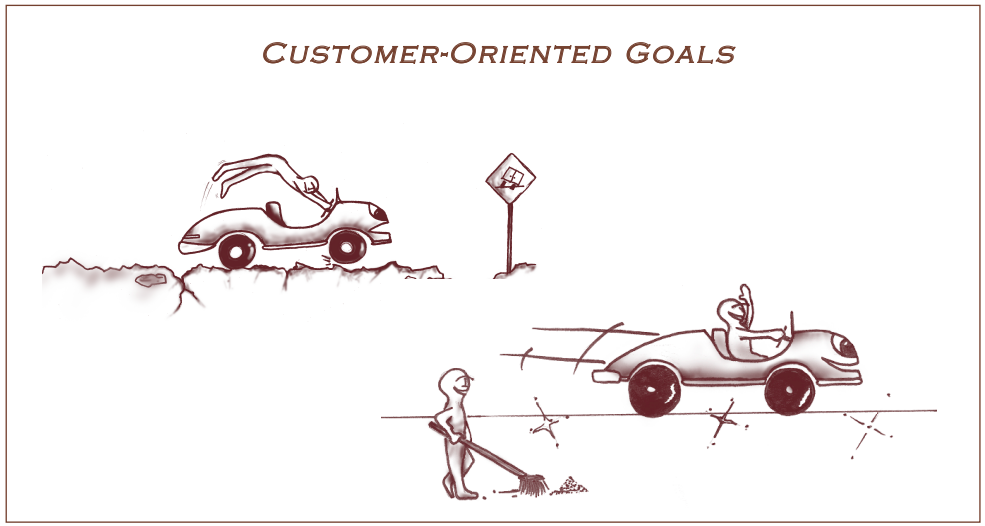
Montana's Transportation Commission makes investment decisions annually on over $300 million in State and Federal funds. Even with the dramatic increase in Federal Transportation funding that Montana received in 1998 with enactment of the Transportation Equity Act for the 21st Century (TEA-21), the State's transportation needs continue to exceed available resources. It is not a surprise that in a state like Montana, with a lot of road miles and very few people, resources will remain scarce, and tough highway investment decisions have to be made.

The MDT's **Performance Programming Process** (P^3) ensures the best systemwide investment decisions are made given:

- Overall direction from our customers;
- Available resources; and
- System performance monitored over time.

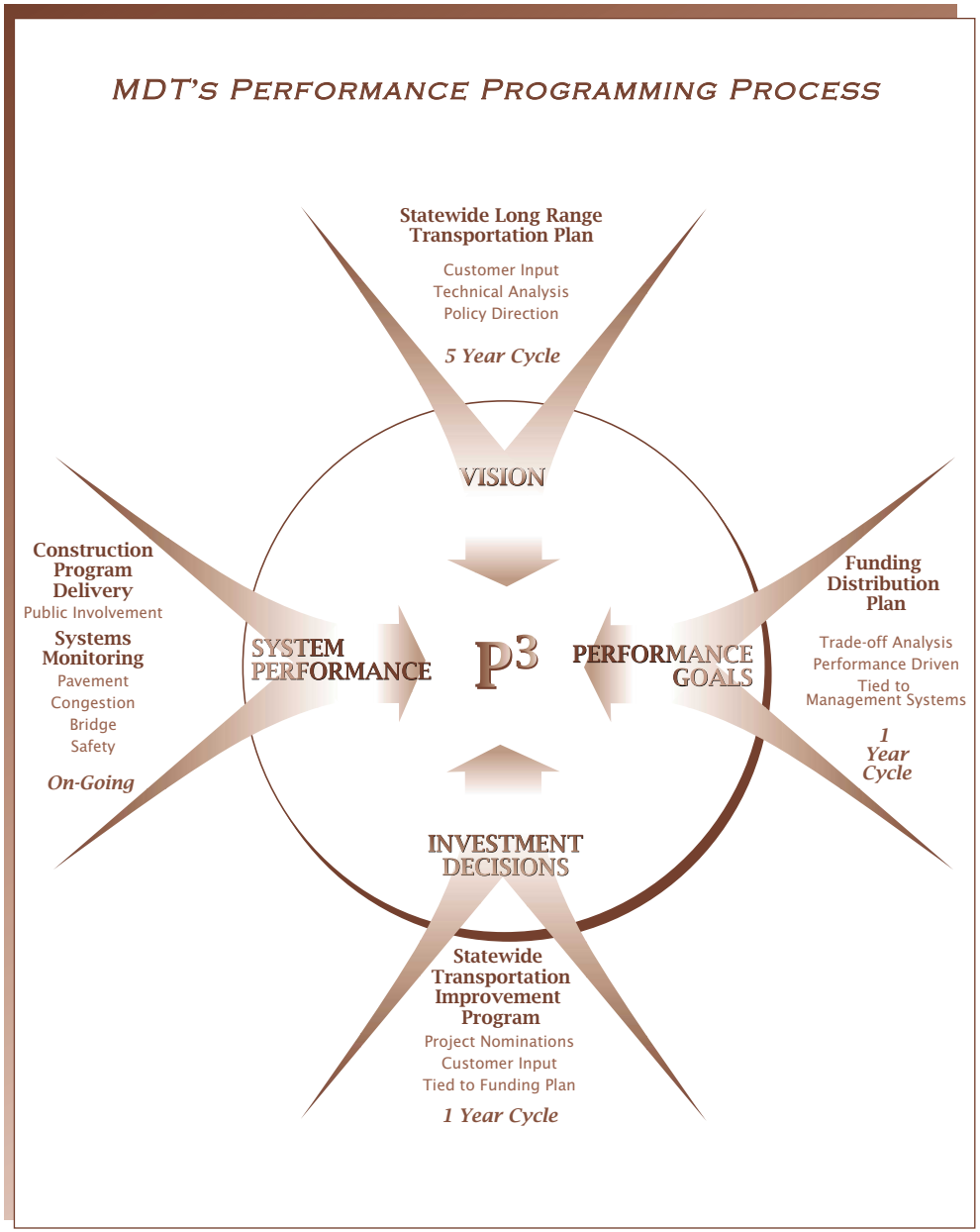
MDT defines the **Performance Programming Process** as:

> *"A method to develop an optimal investment plan and measure progress in moving toward strategic transportation system goals."*



How P3 Works – A Thumbnail Sketch

Several different annual and multiple-year activity cycles interact to plan, program, and deliver Montana's highway improvements. P3 ensures they are all moving in the same direction.



Vision

Montana has a statewide transportation plan that sets a direction and a vision for how its transportation system will be managed and developed into the future. This planning document known as "TRANPLAN 21" was based on extensive public comment and technical analysis. It gives broad direction such as "improve pavement conditions on the Interstate and National Highway Systems." But, it does not specify which projects should be built or the timing of individual improvements.

Performance Goals

Given the direction set in "TRANPLAN 21", the next question is: "What can be achieved in highway system performance given currently available and anticipated revenues?" This question is answered by performing a series of tradeoff analyses, and developing a performance-based funding distribution plan for systems, districts, and type of work. Overall, the aim of this plan is to get the best statewide highway system performance for the available funding – and to commit to moving the overall program toward specific performance goals. This analysis uses the technical power of MDT's management systems described below.

Investment Decisions

The funding distribution plan defines funding levels by district, system, and type of work. This funding plan is based on predicted system performance given anticipated funding and a specific program mix being delivered. Clearly these predictions will only come about if projects are developed and delivered consistent with the plan. While P3 does not "pick" projects, it does guide the project nomination process. The tentative list of proposed projects presented to the public during development of the annual "Statewide Transportation Improvement Program" is consistent with this plan. Based on public comments, a specific project either could enter or be dropped from the new program – but the overall mix supports the performance goals.

System Performance

MDT uses computer-based management systems that assist in summarizing the condition of the transportation system and evaluating

What are the categories of the Funding Plan?

The Funding Plan recommends levels of funding by "District," "System," and "Type of Work." In all cases, the Funding Plan is tied to performance for pavement, congestion, bridge, and safety.

District

Montana has five Commission Districts defined in MCA 2-15-2502. The headquarters of these districts are generally known as Missoula, Butte, Great Falls, Glendive, and Billings.

System

The three rural highway systems are the Interstate, National Highway, and Primary Systems.

Type of Work

The three major categories of Roadway work are Reconstruction, Rehabilitation, and Resurfacing. Bridge and safety work are also tied to performance objectives.

the impacts of various investment options. These systems are used in managing highway pavements, roadway congestion, bridge conditions, and safety, and are supported by an annual data collection program. For example – ride quality, rutting, delay time, traffic volume, pavement cracking, bridge deck condition, and crashes – are just a few of the many technical and operational characteristics tracked annually by these systems. With P^3, the management systems are used to analyze various funding alternatives. Just as importantly, the management systems are also used to track the actual performance of the highway system after the investments are implemented. This feedback loop increases the predictive capacity of the management systems and MDT's overall accountability.

Why Use the Performance Programming Process?

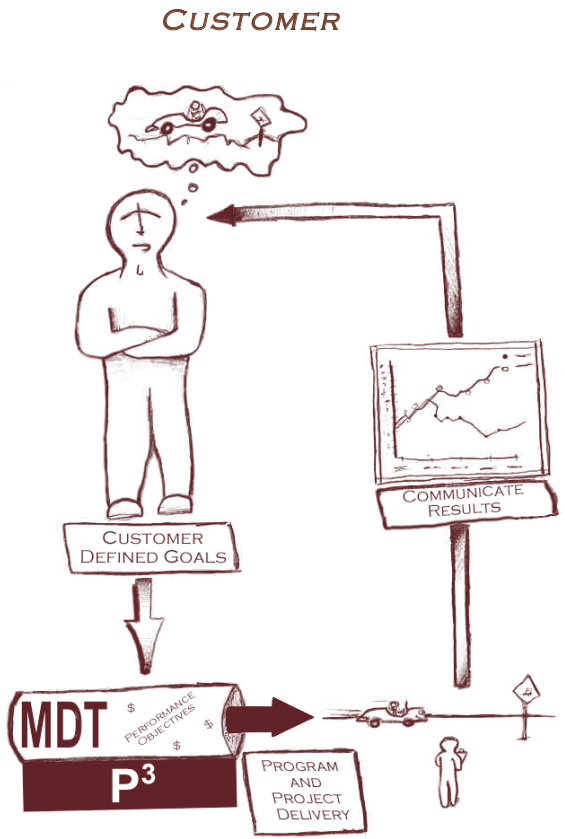
The primary reason to use the **Performance Programming Process** (P^3) is to focus MDT and its investment decision-making on its customers – the users of Montana's transportation system. By establishing customer-oriented goals and basing all of its investment decisions on attaining these goals, MDT has put in place a process that focuses its resources toward meeting the needs of the traveling public and improving its accountability.

By defining the goals it is trying to achieve, P^3 allows MDT to channel its resources into the programs that best meet these goals. MDT can now assess the "bang-for-the-buck" of different investment

choices. With its performance measures, MDT can now determine whether dollars spent on one program versus another brings it closer to achieving its transportation goals.

A second advantage of P^3 is that it provides MDT with a high level of organizational alignment. Private companies and other agencies that have fully implemented performance based budgeting have found it results in everyone "marching to the beat of the same drummer." All employees know what the goals of the Department are, how movement toward these goals will be measured, and how their role in the organization fits into the overall picture.

Third, P^3 gives MDT the tools to monitor its progress toward achieving its goals and to report results. This information gives MDT useful feedback on which programs are working well and which are not.

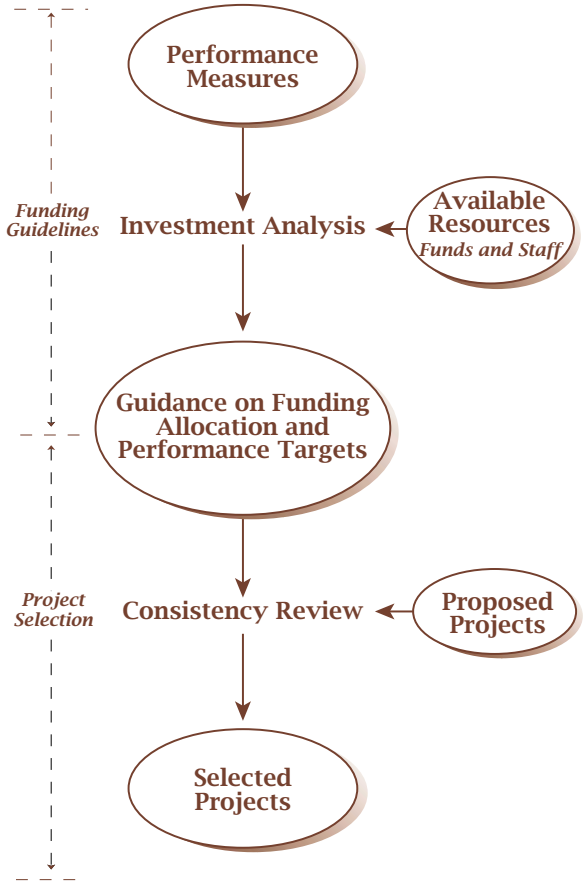


This monitoring process improves the effectiveness of the investments made in Montana's transportation system.

P^3 also improves MDT's accountability in managing the transportation program. By basing investment decisions on a well-defined set of performance objectives, MDT is better positioned to communicate the impacts of its investment choices and report on the results of those choices.

Overall, P^3 improves MDT's accountability to its customers for managing Montana's transportation resources.

MDT's Annual Investment Decision-Making Process



Who Uses Performance-Based Capital Budgeting?

Performance-based planning and budgeting have long been used by private companies to focus their resources on strategic business goals and improve accountability to shareholders.

Over the last decade, approaches similar to Montana's P^3 have been adopted by numerous state transportation departments, major metropolitan transportation offices, and other public agencies. As revenues for public agencies are likely to remain "lean" well into the future, performance-based budgeting and capital programs are expected to be used ever more broadly.

Key P^3 Concepts

Customer-Driven

- Public and stakeholders set vision in "TRANPLAN 21" (statewide long-range transportation plan).
- Public and stakeholders comment annually on individual projects in Statewide Transportation Improvement Program.
- District Offices (those closest to the customers) nominate the projects consistent with the P^3 funding investment plan.

Incremental Development

- New projects consistent with the P^3 funding investment plan are added annually into the program – no existing project is disrupted.
- Management systems will incrementally improve their predictive capabilities based on annual feedback from monitoring – no huge new data system needs to be developed.

High Level of Accountability

- P^3 commits to a project mix tied to predicted system performance.
- P^3 provides a method to track actual performance over time.
- MDT is currently developing performance measures for project delivery.

Supports Sound Investments

- P^3 provides a way to demonstrate tradeoffs inherent in new initiatives.
- P^3 provides a way to demonstrate what is likely to decline if funding is lost.

Cross-Cutting

- P^3 links the policy goals in the long-range plan to specific project investments in the annual construction program.
- P^3 moves all of MDT toward a common goal regardless of organizational unit.
- P^3 provides a feedback loop to monitor predicted versus actual performance – and a way to fine tune investments over time.

How Does P^3 Tie to Federal and State Requirements?

At the Federal level, TEA-21 requires a broad-based customer-oriented planning process tasked with ensuring that existing transportation resources are preserved. Also under TEA-21, there must be a link between the goals of the long-range plan and the actual investment decisions made in the annual Statewide Transportation Improvement Program or 'STIP' (23 USC, Section 135).

P^3 fulfills all of these Federal expectations.

On the State level, P^3 will in no way affect the funding distributions provided in State statute for the Urban and Secondary Systems (MCA 60-3-206 and 211). P^3 also does not apply to the Community Transportation Enhancement Program. The analysis done in support of P^3 supports, and is consistent with, Montana's statutory requirement for the distribution of Primary Highway funds (MCA 60-3-205) as well as the allocation of funds for the Interstate and the National Highway Systems.

While not a State or Federal "requirement," P^3 will allow MDT to tell Montana's Delegation and the Legislature what it plans to accomplish and has accomplished with Montana's transportation resources.

MDT Objectives and System Performance Measures

MDT has established objectives, performance measures, and performance targets in four program areas: pavement, bridge, safety, and congestion. Other areas may be added in the future.

Pavement

Objective:

Preserve highway pavement condition at existing or higher levels on the Interstate, NHS, and Primary Systems.

Performance Measure:

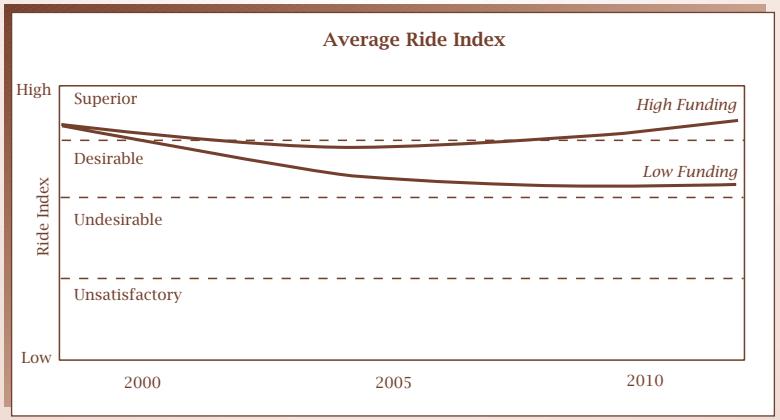
Ride Index – a measure of the quality (smoothness) of the ride as perceived by the highway user.

Performance Target:

Interstate – average ride desirable or superior, less than 10 percent of miles below desirable.

NHS – average ride desirable or superior, less than 20 percent of miles below desirable.

Primary System – average ride desirable or superior, less than 20 percent of miles below desirable.



A higher funding level would result in better Average Ride Index.

Bridge

Objective:

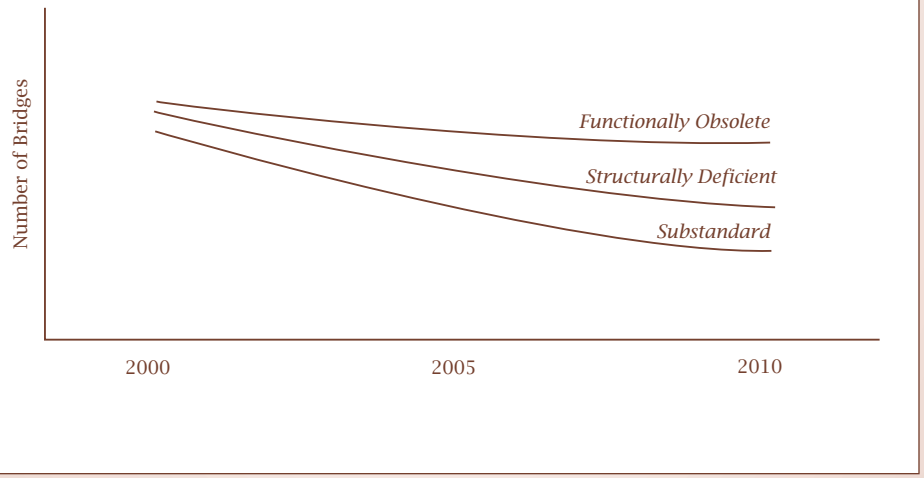
Improve the condition of the bridges on the state highway system.

Performance Measure:

Number of functionally obsolete, structurally deficient, and substandard bridges as measured by the National Bridge Inventory Condition Assessment.

Performance Target:

Reduce number of functionally obsolete, structurally deficient, and substandard bridges on the state highway system.



The number of functionally obsolete, structurally deficient and substandard bridges changes over time depending on the level of funding.

Safety

Objective:

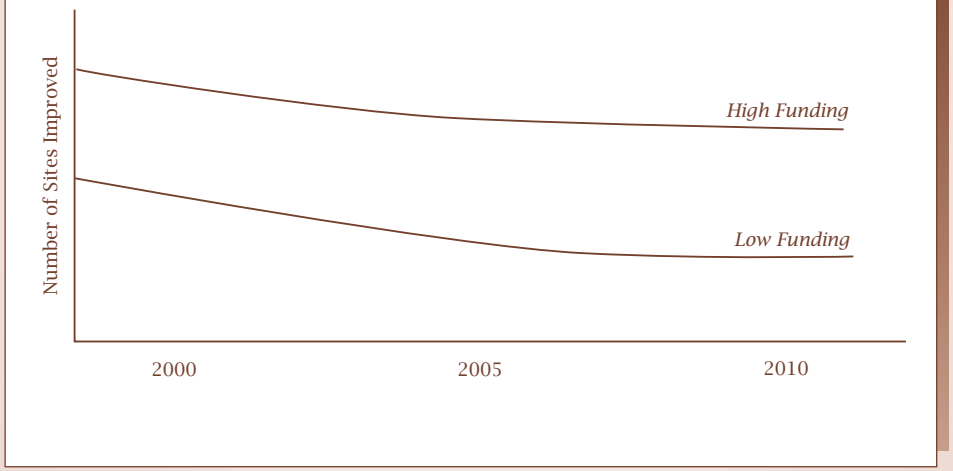
Improve the safety of the state highway system.

Performance Measure:

Number of correctable crash sites funded for improvement.

Performance Target:

Reduce the number of sites with correctable crash features.



MDT can improve a larger number of correctable crash sites with more funding.

Congestion

Objective:

Maintain and improve the congestion levels on the rural portion of the highway system and improve major interchanges and system operation within urban areas.

Performance Measure:

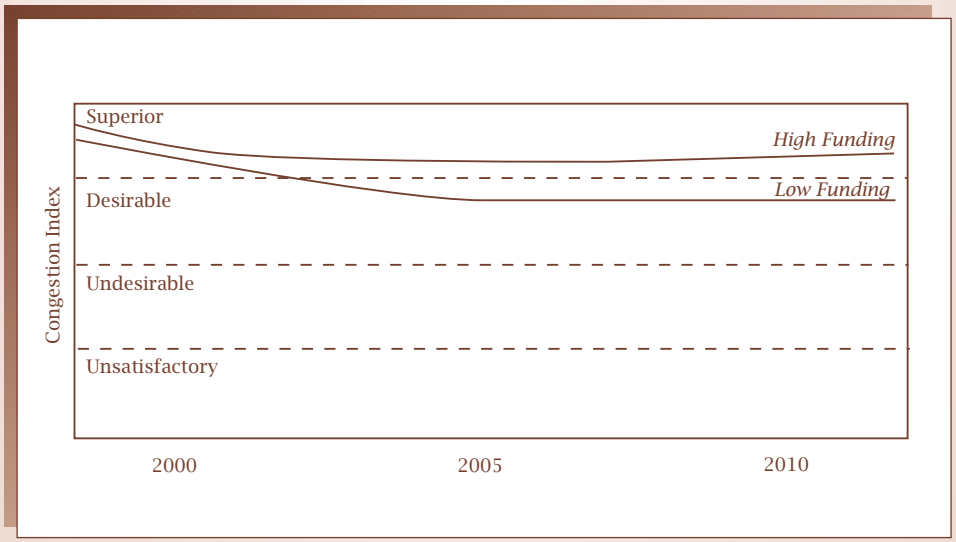
Congestion Index on the highway system – a measure of travel delay. The higher the congestion index, the less congestion and the more mobility experienced by travelers.

Performance Target:

Interstate – Congestion Index ≥ 70 (Level of Service B).

NHS – Congestion Index ≥ 55 (Level of Service C).

Primary System – Congestion Index ≥ 55 (Level of Service C).



A HIGHER LEVEL OF FUNDING WOULD GIVE A LOWER LEVEL OF CONGESTION.

Note: Throughout this booklet the Non-Interstate NHS is referred to as the NHS or National Highway System.

Appendix

Projections for the System Performance Measures

MDT has completed the first cycle of the P^3 process. The figures in this appendix show the performance projections for the Pavement, Congestion and Safety program areas based on anticipated funding. These figures will be updated each year as MDT goes through the P^3 process and updates its Funding Plan.

Pavement

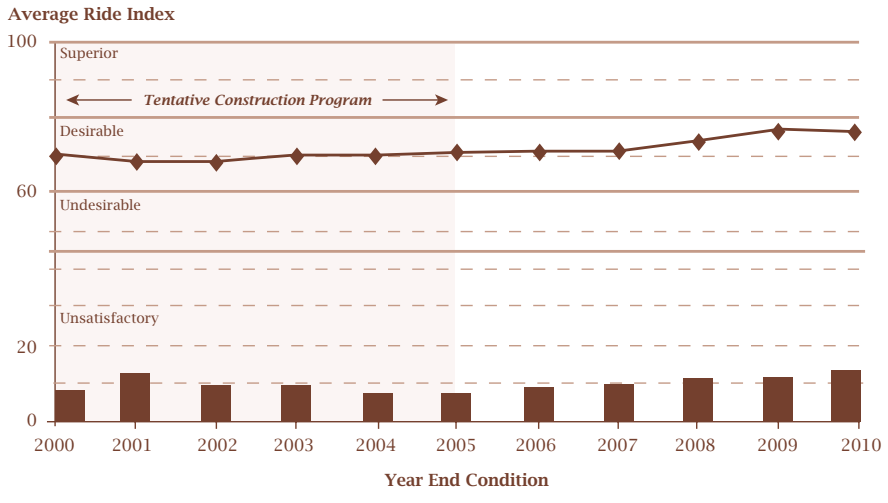
The three figures show the projected roadway surface conditions for the Interstate, NHS and Primary Systems. These projections assume the current Tentative Construction Program (2001-2004) is carried out and future funding in the years 2005-2010 averages $65 million annually for roadway work on the Interstate System, $61 million per year on the NHS and $70 million annually on the Primary System. The funding in any given year varies somewhat from these averages. Please note that roadway work will address performance for both pavement and congestion.

Under this funding scenario, the Average Ride Index is projected to stay within the Desirable band for the next 10 years for all three roadway systems (Interstate, NHS and Primary). The percentage of miles with Undesirable or Unsatisfactory Ride Index stays between 8 and 12 percent for the Interstate, between 15 and 20 percent for the NHS, and between 14 and 18 percent for the Primary System.

The performance goal for Average Ride Index is to maintain it at Superior or Desirable (Index > 60) for each of the three roadway systems of Interstate, NHS and Primary Systems. An additional performance goal is to maintain the percentage of roadway with Undesirable or Unsatisfactory Ride Index at less than 10 percent for the Interstate System, and less than 20 percent for both the NHS and Primary Systems.

APPENDIX

Interstate Average Ride Index



Interstate System has 1191 center line miles.

Bridge

The funding allocated to the Bridge program area in the Tentative Construction Program will maintain or slightly improve the condition of the States bridges during the 2000-2004 time period.

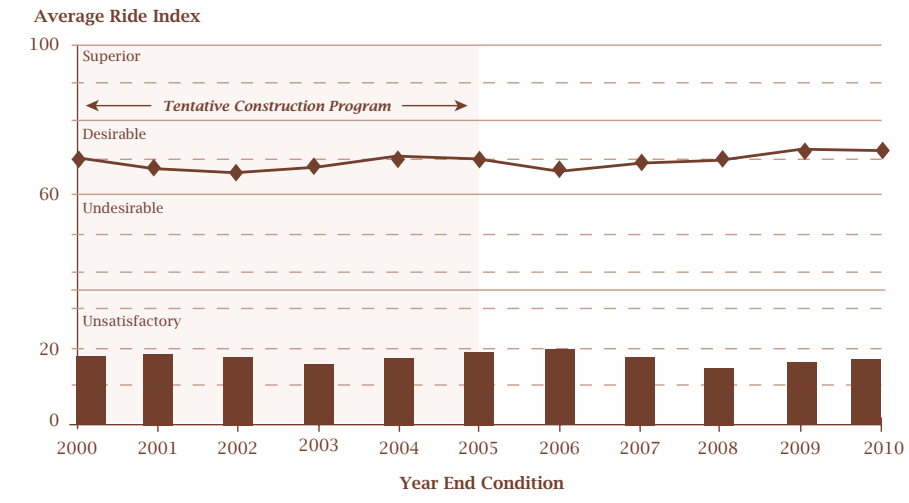
Congestion

The figure shows the Average Congestion Index for the Interstate, NHS, and Primary Systems. This figure assumes the funding invested in roadways (see pavement above) will address both pavement and congestion performance.

Under this funding scenario, the Average Congestion Index stays above 90 for the Interstate System over the next 10 years and between 70 and 80 for the NHS and Primary Systems.

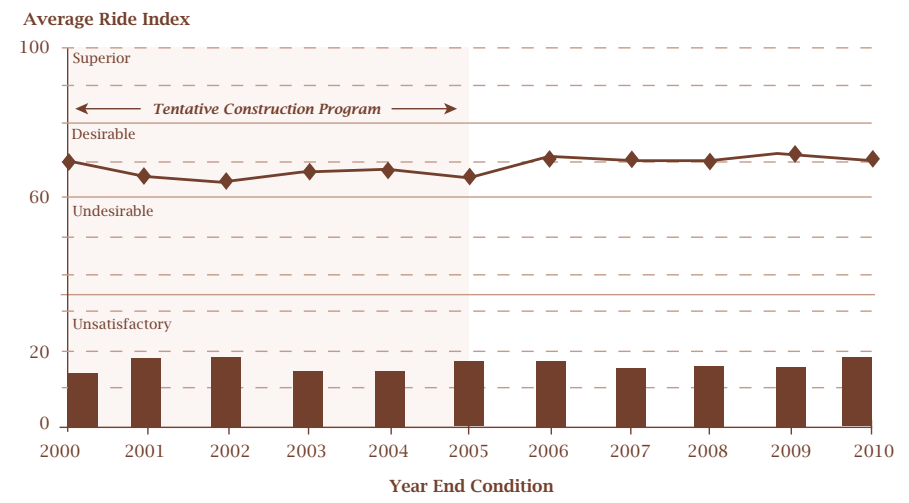
The performance goal is to maintain Average Congestion Index above 70 for the Interstate System, and above 55 for the NHS and Primary Systems. The higher the congestion index, the less congestion and the greater the mobility experienced by the traveler.

NHS Average Ride Index



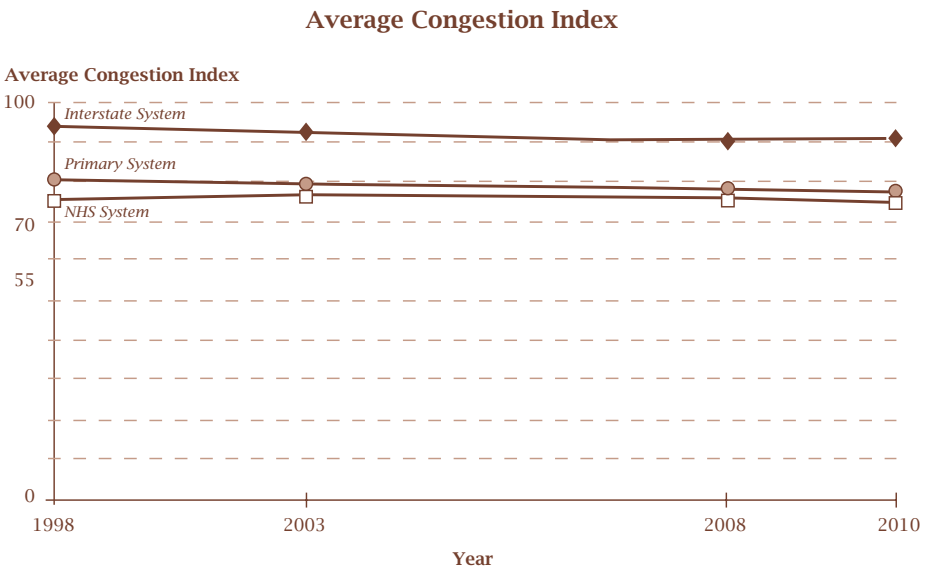
NHS (Non-Interstate) System has 2683 center line miles.

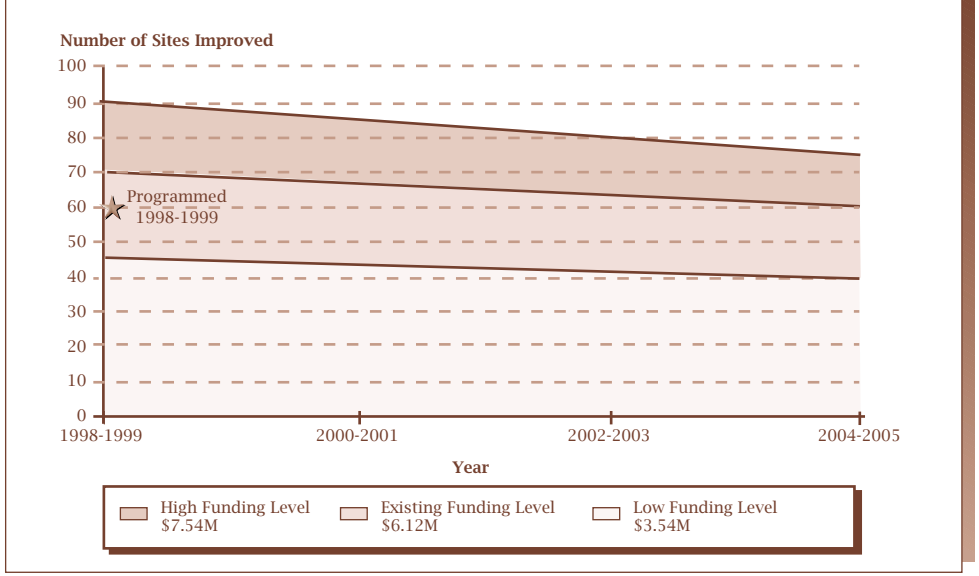
Primary System Average Ride Index



Primary System has 2815 center line miles.

APPENDIX





SAFETY

The figure shows the number of crash-prone sites that can be corrected at three different levels of funding. At the existing funding level of $6.12 million per year, between 60 and 70 sites can be corrected bi-annually. The number of sites that can be improved for a given funding level drops over time because the cost per site increases. This is partly due to inflation but more so because all the "easy fixes" have been done and the remaining locations are more costly to deliver. Hence, while the cost for each project increases, so does the benefit experienced at that location in terms of operational safety.

A return of $3-$6 million in accident cost savings for each $1 million dollars invested in the construction safety program found from an analysis of before/after safety reviews of correctable crashes at improved sites. Accident cost savings include injuries, fatalities and property damage.

	Year			
	1998-1999	2000-2001	2002-2003	2004-2005
High Funding Level $7.54M	90	85	80	75
Existing Funding Level $6.12M	70	67	63	60
Low Funding Level $3.54M	45	43	42	40

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NOTES